Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

- 1. (Currently Amended) A pharmaceutical composition comprising a liposome associated formulated with at least one polypeptide that emprising comprises an amino acid sequence at least 80% identical to the amino acid sequence set forth in SEQ ID No No: 2 or a polypeptide fragment thereof, wherein said polypeptide composition is capable of raising antibodies having binding specificity to the polypeptide of SEQ ID NO: 2 inducing an immune response against Neisseria.
- 2. (Currently Amended) A—The pharmaceutical composition according to claim 1, wherein said composition comprises a liposome associated withthe at least one polypeptide comprising—comprises an amino acid sequence at least 90% identical to the amino acid sequence set forth in SEQ ID No-NO: 2.
- 3. (Currently Amended) A-The pharmaceutical composition according to claim 1, wherein said-composition comprises a liposome associated withthe at least one polypeptide comprises an amino acid sequence at least 95% identical to the amino acid sequence set forth in consisting of SEQ ID No NO: 2 or a fragment or analog thereof.
- 4. (Currently Amended) A—The pharmaceutical composition according to claim 1, wherein said composition comprises a liposome associated withthe at least one polypeptide consisting of comprises the amino acid sequence set forth in SEQ ID No-NO: 2.

5. (Currently Amended) A pharmaceutical composition comprising a liposome associated formulated with at least one epitope bearing portion of a polypeptide fragment comprising at least 15 contiguous amino acids of SEQ ID No-NO: 2, wherein the composition is capable of inducing an immune response against *Neisseria* or a fragment or analog thereof.

6. (Canceled)

- 7. (Currently Amended) A-The pharmaceutical composition emprising a liposome associated with at least one isolated polypeptide according to claim 1, wherein said at least one isolated polypeptide is selected from:
- (a) a polypeptide having at least 70% identity over its entire length to the polypeptide of SEQ ID No : 2 or a fragment thereof;
- (b) a polypeptide having at least 80% identity over its entire length to the polypeptide of SEQ ID No : 2 or a fragment thereof;
- (c) a polypeptide having at least 95% identity over its entire length to the polypeptide of SEQ ID No : 2 or a fragment thereof;
 - (d) a polypeptide comprising SEQ ID No : 2 or a fragment thereof;
- (e) the polypeptide of (a), (b), (c), or (d), a polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2 wherein the N-terminal Met-methionine at residue 1 is deleted; and
- (f)—thea polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2 of (a), (b), (c), (d), or (e), wherein the secretory amino acid sequence is deleted,

wherein each of said polypeptide of (a) (f) is capable of raising antibodies having binding specificity to the polypeptide of SEQ ID NO: 2.

8. -10. (Canceled)

- 11. (Currently Amended) A pharmaceutical <u>composition</u> comprising a liposome <u>associated formulated</u> with <u>a chimeric polypeptides comprising that comprises</u> two or more <u>fragments fragments</u> of a polypeptide, which polypeptide comprises the amino acid sequence set forth in of SEQ ID No NO: 2, wherein each fragment is at least 15 amino acids, and wherein said polypeptides the two or more fragments are linked as to formed form a the chimeric polypeptide, and wherein said chimeric polypeptide composition is capable of raising antibodies having binding specificity to the polypeptide of SEQ NO: 2 inducing an immune response against *Neisseria*.
- 12. (Currently Amended) A-The pharmaceutical composition according to claim 1, wherein at least two or more polypeptides of claim 1 the composition comprises at least two polypeptides wherein each polypeptide comprises an amino acid sequence at least 80% identical to the amino acid sequence set forth in SEQ ID NO: 2, and wherein the at least two polypeptides are linked as to form a chimeric polypeptide.
- 13. (Currently Amended) A-The pharmaceutical composition according to claim 1, wherein said liposome comprises a lipids selected from a synthetic phospholipids, a bacterial phospholipids and/or cholesterol.
- 14. (Currently Amended) A—The pharmaceutical composition according to claim 13, wherein said liposome comprises a bacterial lipids-phospholipid extracted from E. coli, N. meningitidis, or N. lactamica.
- 15. (Currently Amended) A—The pharmaceutical composition according to claim 1, wherein said liposome comprises <u>a</u> lipids selected from <u>a</u> phosphatidyl ethers, <u>and a</u> <u>phosphatidyl</u> esters, <u>a</u> glycerides, <u>a</u> gangliosides, sphyngomyelin, and <u>a</u> steroids.

- 16. (Currently Amended) A-The pharmaceutical composition according to claim 13, wherein said lipids are the lipid is selected from:
- 1,2-Dilauroyl-sn-Glycero-3-Phosphate (DLPA),

Dimyristoyl-sn-Glycero-3-Phosphate (DMPA),

- 1,2-Dipalmitoyl-sn-Glycero-3-Phosphate (DPPA),
- 1,2-Distearoyl-sn-Glycero-3-Phosphate (DSPA),
- 1,2-Dioleoyl-sn-Glycero-3-Phosphate (DOPA),
- 1-Palmitoyl-2-Oleoyl-sn-Glycero-3-Phosphate (POPA),
- 1,2-Dilauroyl-sn-Glycero-3-Phosphocholine (DLPC),
- 1,2-Ditridecanoyl-sn-Glycero-3-Phosphocholine,
- 1,2-Dimyristoyl-sn-Glycero-3-Phosphocholine (DMPC),
- 1,2-Dipentadecanoyl-sn-Glycero-3-Phosphocholine,
- 1,2-Dipalmitoyl-sn-Glycero-3-Phosphocholine (DPPC),
- 1,2-Diheptadecanoyl-sn-Glycero-3-Phosphocholine,
- 1,2-Distearoyl-sn-Glycero-3-Phosphocholine (DSPC),
- 1,2-Dimyristoleoyl-sn-Glycero-3-Phosphocholine.
- 1,2-Dipalmitoleoyl-sn-Glycero-3-Phosphocholine,
- 1,2-Dioleoyl-sn-Glycero-3-Phosphocholine (DOPC),
- 1-Myristoyl-2-Palmitoyl-sn-Glycero-3-Phosphocholine.
- 1-Myristoyl-2-Stearoyl-sn-Glycero-3-Phosphocholine,
- 1-Palmitoyl-2-Myristoyl-sn-Glycero-3-Phosphocholine.
- 1-Palmitoyl-2-Stearoyl-sn-Glycero-3-Phosphocholine,
- 1-Palmitoyl-2-Oleoyl-sn-Glycero-3 -Phosphocholine (POPC),
- 1-Palmitoyl-2-Linoleoyl-sn-Glycero-3-Phosphocholine,
- 1,2-Dilauroyl-sn-Glycero-3-Phosphoethanolamine (DLPE).
- 1,2-Dimyristoyl-sn-Glycero-3-Phosphoethanolamine (DMPE),
- 1,2-Dipalmitoyl-sn-Glycero-3-Phosphoethanolamine (DPPE),
- 1,2-Dipalmitoleoyl-sn-Glycero-3-Phosphoethanolamine,
- 1,2-Distearoyl-sn-Glycero-3-Phosphoethanolamine (DSPE),

- 1,2-Dioleoyl-sn-Glycero-3-Phosphoethanolamine (DOPE),
- 1-Palmitoyl-2-Oleoyl-sn-Glycero-3-Phosphoethanolamine (POPE),
- 1,2-Dilauroyl-sn-Glycero-3-[Phospho-RAC-(1-glycerol)] (DLPG),
- 1,2-Dimyristoyl-*sn*-Glycero-3-[Phospho-*RAC*-(1-glycerol)] (DMPG), 1,2-Dipalmitoyl-*sn*-Glycero-3-[Phospho-*RAC*-(1-glycerol)] (DPPG), 1,2-Distearoyl-*sn*-Glycero-3-[Phospho-*RAC*-(1-glycerol)] (DSPG),
- 1,2-Dioleoyl-sn-Glycero-3-[Phospho-RAC-(1-glycerol)] (DOPG),
- 1-Palmitoyl-2-Oleoyl-sn-Glycero-3-[Phospho-RAC-(1-glycerol)] (POPG),
- 1,2-Dilauroyl-sn-Glycero-3-[Phospho-L-Serine] (DLPS),
- 1,2-Dimyristoyl-sn-Glycero-3-[Phospho-L-Serine] (DMPS),
- 1,2-Dipalmitoyl-sn-Glycero-3-[Phospho-L-Serine] (DPPS),
- 1,2-Distearoyl-sn-Glycero-3-[Phospho-L-Serine] (DSPS),
- 1,2-Dioleoyl-sn-Glycero-3-[Phospho-L-Serine] (DOPS), and
- 1-Palmitoyl-2-Oleoyl-sn-Glycero-3-[Phospho-L-Serine] (POPS).
- 17. (Currently Amended) A-The pharmaceutical composition according to claim 13, wherein said liposome further comprises at least oned one adjuvant selected from Lipid A, monophosphoryl lipid A (MPLA), a lipopolysaccharides, and a cytokines.
- 18. (Currently Amended) A—The pharmaceutical composition according to claim 13, wherein said liposome comprises 0 to 25% cholesterol.
- 19. (Currently Amended) A—The pharmaceutical composition according to any one of claims 1-5, 7, 11, and 12elaim—1, wherein said composition further comprises a pharmaceutically acceptable adjuvant.
- 20. (Currently Amended) A method for inducing an immune response against N. meningitidis, in a host, comprising administering to said host an immunogenically

<u>immunogenic</u>, effective amount of a pharmaceutical composition according to claim 1 to elicit an immune response.

- 21. (Currently Amended) A method for preventing and/or treating a N. meningitidis infection comprising administering to a host in need thereof a prophylactic or therapeutic amount of a pharmaceutical composition according to claim 1.
- 22. (Currently Amended) A method for preventing and/or treating a neisserial infection caused by a *Neisseria* sp. selected from *N. meningitidis*, *N. gonorrhoeae*, *N. lactamica* and *N. polysaccharea*, said method comprising administering to a host in need thereof a prophylactic or therapeutic amount of a pharmaceutical composition according claim 1.
- 23. (Currently Amended) A method for the treatment or prophylaxis of meningitidis and meningococcemia in a host, comprising administering to said host an effective amount of a pharmaceutical composition according to claim 1.
- 24. (Previously Presented) A method according to claim 20, wherein said host is a mammal.
 - 25. (Original) A method according to claim 24, wherein said host is a human.
- 26. (Original) A method according to claim 25, wherein said host is an adult human.
- 27. (Currently Amended): A method according to claim 20 wherein said-the pharmaceutical composition is are-administered in unit dosage form of about 0.001 to 100 μg/kg (antigenpolypeptide weight/body weight) with an interval of about 1 to 6 weeks intervals between immunizations.

28. –33. (Canceled)

- 34. (Currently Amended) A—The pharmaceutical composition of claim 7according to any one of claims 1-5, 7, 11, and 12, wherein said polypeptide is capable of raising eliciting antibodies where that are bacteriocidal bactericidal.
- 35. (Currently Amended) A-The pharmaceutical composition comprising a liposome associated with at least one isolated polypeptide, wherein said isolated polypeptide is selected from according to any one of claims 1-5, 7, 11, and 12:
- (a) a polypeptide having at least 70% identity over its entire length to the polypeptide of SEQ ID No : 2 or a fragment thereof;
- (b) a polypeptide having at least 80% identity over its entire length to the polypeptide of SEQ ID No : 2 or a fragment thereof;
- (c) a polypeptide having at least 95% identity over its entire length to the polypeptide of SEQ ID No : 2 or a fragment thereof;
 - (d) a polypeptide comprising SEQ-ID No : 2 or a fragment thereof;
- (e) the polypeptide of (a), (b), (c), or (d), wherein the N-terminal Met residue is deleted; and
- (f) the polypeptide of (a), (b), (c), (d), or (e), wherein the secretory amino acid sequence is deleted,

wherein each of said polypeptide of (a) (f)the composition is capable of raising eliciting antibodies having binding specificity to NspAthat bind to N. meningitidis of any one of serogroup serogroups-A, B, and C.